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TELIDON REPORTS

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CONTENTS

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TELIDON TORCH PASSES TO PRIVATE SECTOR

This is the farewell issue of Telidon Reports, a newsletter published by the Department of Communications during the past five years. Its objective has been to foster the growth and development of Telidon through exchange of topical industry information.

Although the Government of Canada will continue to support the informatics industry in many ways, the formal transfer of Telidon technology to the private sector is now complete, and this newsletter's place will be taken by the industry journals.

This final issue gives some of the highlights of the past six years during which the federal government has helped to stimulate the growth of Telidon and worked to establish the North American Presentation Level Protocol Syntax (NAPLPS). It outlines ways in which some departments will continue to be of assistance in research and development, marketing and other areas.

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MESSAGE FROM THE MINISTER

As the Department of Communications ends its six year Telidon Program, it is my privilege to pronounce the epilogue to the Telidon development program. Although a comparative newcomer to the department, I have closely followed the development of Telidon and the establishment of the NAPLPS standard because they are important to Canada in so many ways.

The effort and investment by industry, non-profit organizations, government, and the academic community has helped to transform Telidon from a concept for an image communications protocol to a widely accepted international standard. Thanks to imagination, hard work, enthusiasm and commitment to excellence, Telidon has been recognized as a videotex standard by important national and international standards setting bodies such as the Canadian Standards Association, the American National Standards Institute, and the CCITT. This, in turn, has contributed immensely to Canada's reputation in the critically important high technology marketplace.

Although the torch is now being passed to the private sector, I want to assure you the Government of Canada will continue to provide encouragement and support in many forms.

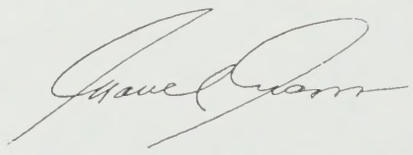
The Department of Communications is proud of its role in encouraging the development of a new industry. Although our direct involvement in funding Telidon development is now finished, I hope that the close co-operation which has occurred between government, industry and other organizations can be built upon in the future as we address the continuing array of new challenges which informatics development are presenting to us.

Much has happened since the Department of Communications embarked on the Telidon program in 1978 and we are now considering Telidon as part of broader concerns with informatics.

Informatics is a major growth area that affects many segments of our society -- office automation, retailing, publishing, and entertainment -- to name just a few. It will be an increasingly important employer, requiring creative approaches to technology development, marketing and content development.

There are still many challenges for Canada in this important field. As a nation, we continue to import more than we export in both equipment and software. Our goal must be to seize the opportunities posed by the growing market for informatics products. The warm reception given to Telidon by major enterprises in the United States, Japan, Australia, Switzerland and other countries shows that we can meet this challenge. The task now is for federal and provincial governments to work with industry to create an environment that allows the private sector to fulfill its potential as a world-class supplier of information technology to both Canadian and foreign markets. For this reason, the Government of Canada is actively seeking the views of Canadians in all regions and from all walks of life to help us reach the appropriate mixture of regulatory policies, research and development programs, fiscal incentives and marketing support mechanisms to foster a climate of growth.

Many activities related to the development of this industry will continue at the Department of Communications. We take the opportunity of this final Telidon Reports to bring them to your attention and to invite your further participation.



Marcel Masse

TELIDON MILESTONES

April 1978
Geneva: The creators of Telidon realize they can improve on Prestel and Antiope videotex protocols.

May 1978
Deputy Minister Bernard Ostry authorizes the development of Telidon in the CRC laboratory.

August 15, 1978
Telidon unveiled to industry for first time; Telidon Program formally announced.

April 2, 1979
DOC announces a $9 million co-operative program with industry to develop Telidon over four years.

July 6, 1979
Telidon tests using the Canadian satellite Hermes are successful.

July 20, 1979
DOC supplies Manitoba Telephone System with Telidon equipment for Project IDA, the first field trial.

August 20, 1979
Bell Canada announces its VISTA field trial. DOC contributes $2.5 million; Bell Canada $7.5 million.

February 1, 1980
DOC/TVOntario begin one-year educational field trial, the first to get underway.

July 6, 1980
PBS in Washington, D.C. selects Telidon for the first teletext consumer trial.

June 18, 1980
Project IDA begins: Joint venture between DOC, Manitoba Telephone System, Infomart, Cybershare, the Winnipeg Tribune, the University of Manitoba and others.

September 23, 1980
The Department of Supply and Services begins their Cantel service by installing Telidon public information booths across Canada.

November 1980
CCITT adopts Telidon as a world standard.

November 6, 1980
Grassroots, world's first commercial Telidon service, begins operation in Manitoba.

February 6, 1981
DOC responds to industry proposals by announcing $27.5 million Telidon funding over the next two years.

February 19, 1981
Time Inc. announces Telidon teletext trial.

March 21, 1981
Touche Ross New Perspectives Award to Telidon.

May 1981
AT&T endorses Telidon as basis for North American videotex standard.

January 12, 1982
Announcement made of 50 projects to receive IISP funding across Canada.

April 30, 1982
Public Initiative Program announced to assist non-profit Telidon projects.

February 25, 1983
DOC announces $23 million Telidon Exploitation Program for content development, marketing support and government procurement.

April 12, 1983
CBC launches IRIS - $6 million national teletext trial in Toronto, Montreal and Calgary.

December 1983
CSA and ANSI published NAPLPS as the videotex standard for North America.

January 13, 1984
Announcement made of 27 projects to receive CDP funding across Canada.

January 1984
University of Alaska selects NABTS for statewide satellite delivered tele-education service.

March 1984
CVCC/EIA endorses NABTS teletext standard. CBS launches NABTS teletext service.

April 1984
Norpak/Rockwell announces development of VLSI NAPLPS chip.

December 1984
CCITT ratifies NAPLPS, opening the way to immediate production of low-cost equipment for commercial use.

December 1984
Herb Bown, known as the "Father of Telidon," was notified he will be invested with the Order of Canada on April 10, 1985 at Government House.

February 1985
Telidon exhibits at the World's Fair in Japan.

WHAT HAVE WE ACCOMPLISHED?

As the transfer of the Telidon technology to the private sector nears completion, and this final issue goes to press, TELIDON REPORTS takes a look at what has been achieved by an ambitious program the Department of Communications (DOC) launched.

Two parallel and dependent tasks were undertaken by the Telidon Program -- the development of the North American Presentation Level Protocol Syntax (NAPLPS/Telidon standard), and the establishment of the videotex industry in Canada and abroad based on this now internationally accepted standard.

Neither of these tasks could have been accomplished without the special co-operation of many sectors, which has been the hallmark of this program. Many people have faced the difficulties and setbacks inevitable in such a program. Now all the participants should enjoy the worldwide recognition that Telidon has achieved, and look forward to expanding markets as technology and attitudes facilitate its acceptance.

THE STANDARD IS SET

To quote Dr. Y.F. Lum, the Director of Communications Networks Research at DOC, "Technical decisions have far reaching effects on the country's prosperity." The story of Canadian efforts to establish North American Presentation Level Protocol Syntax (NAPLPS) as the nationally and internationally accepted Telidon standard is an exciting success story with far-reaching implications. It is the story of a struggle for well-deserved recognition often threatened by international competition and even subterfuge.

As far back as 1978 at the International Telegraph and Telephone Consultative Committee (CCITT) meeting in Geneva, Dr. Lum et al recognized that the alphamosaic Prestel and Antiope videotex systems could be improved by applying the alphageometric videotex expertise developed at DOC's Communications Research Centre since the late 1960s. The inspiration to apply existing knowledge to the development of a two-way alphageometric graphics capability came from seeing the British and French systems in action.

The Image Communications Group proceeded to develop Telidon to the S-100 standard (Communications Research Centre Technical Note 699) that was successfully demonstrated in London in 1979. The following year it was accepted, not without struggle, by the CCITT along with the British and French systems.

This acceptance led to the 1981 announcement by AT&T of its own protocol, which was an enhancement of the Telidon principles. Following this the Canadian Standards Association (CSA) and the American National Standards Institute (ANSI) worked together towards one North American standard, which was announced in February 1982 (Communications Research Centre Technical Note 709).

The NAPLPS was published by the CSA and the ANSI in December 1983 (CSA Document T-500) and by the CCITT in December 1984. This, at last, allows the necessary confidence in the marketplace for the development of decoders, terminals and other essential equipment without fear of obsolescence. The standard has allowed the start of mass production of low-cost microchips that can be used in the manufacture of personal computers, television sets and other equipment. It should be remembered that Telidon's inventors had the foresight to make the technology independent of any system or carrier. Nevertheless, until the NAPLPS was adopted, the price reduction that accompanies mass production could not happen. It is now predicted by the industry that Telidon will be commonplace in the majority of Canadian households by the 1990s, about half a decade later than earlier optimistic forecasts. In the 1980s it is finding its place in business, commerce and education. Its advantages have now been proven and accepted, its limitations recognized. Recent developments in interfacing minicomputers with Telidon, or using personal computers as decoders using appropriate software, will enhance Telidon's entry into the home market. Canadian companies have been at the forefront of the development of Telidon software decoders.

THE BEGINNING OF TELIDON

The use of Telidon since its inception at DOC's Communications Research Centre has seen three major phases. The circuit design that led to Telidon was first developed for graphic representation as part of Canada's military program. Viewing of the Prestel and Antiope systems in Geneva in 1978 triggered the realization in the minds of Herb Bown et al that they had the basis for a better product. It was due to the foresight of Bernard Ostry, then Deputy Minister of DOC, that the green light for development was given. The Image Communications Group at CRC soon adapted Picture Description Instructions (PDIs) to alphageometric uses in Telidon. The program was announced by the Minister of Communications in August 1978.

TERMINAL DEVELOPMENT AND TESTING

A rapid phase of systems design and manufacture followed. DOC researchers, working with companies such as Norpak, Systemhouse and Genesys Group, developed the early terminals, host systems and communications software. Other manufacturers, including Electrohome, AEL Microtel, Northern Telecom and Cableshare also began work on terminal development. From mid-1979 until 1981, market penetration began under the $9 million DOC Telidon Program that stimulated product development and early field trials. The Manitoba Telephone System's IDA, Infomart's Grassroots, Bell Canada's VISTA, and TVOntario trials are among the most notable. During this period Telidon was successfully tested via the Canadian satellite Hermes, and the first major sale was made to the Venezuelan government.

ADVISORY GROUPS FORMED

The Videotex Information Providers Association of Canada (VISPAC) was formed in late 1979 to further the best interests of the Telidon community. The Canadian Videotex Consultative Committee (CVCC) came into existence in 1980. With expert representation from both the public and private sectors, this committee advised the Minister of Communications on policy and development issues. Other associations have been established since with similiar intentions such as the Interprovincial Association for Telematics and Telidon (IPATT), which has education at the forefront of its goals.

TOWARDS FULL COMMERCIALIZATION

The final stage of development has seen further federal funding of $27.5 million for industrial development from March 1981 to March 1983, followed by an extension to the end of March 1985. This was accompanied by a further $23 million for content development, market penetration and government procurement. It has been estimated that industry and other governments have contributed four times as much to the Telidon Program as has the federal government.

Five avenues of development were chosen to stimulate the adoption of Telidon -- field trial assistance, the Industry Investment Stimulation Program, the Public Initiatives Program, the Content Development Program, international marketing and direct procurement from Canadian firms. At the same time, DOC conducted research programs to expand the technology in areas such as image compression, talking Telidon and photoTelidon and also to examine the sociological effects of the introduction of Telidon.

FIELD TRIALS AND SERVICES

During the first four years of the Telidon Program, more than 40 trials and services were conducted in Canada and abroad. The results of these trials are well documented, and have provided essential information on which governments and industry can base decisions as to the most beneficial and commercially viable uses of Telidon.

INDUSTRY GROWTH THROUGH IISP

In February 1981, the Industry Investment Stimulation Program (IISP) invited Canadian firms, Crown corporations, non-profit organizations and educational institutions to compete for $10 million of federal funding that would be used to offset up to 50 per cent of their Telidon equipment costs. Applicants were required to purchase a matching value of Telidon terminals to those funded by DOC. The major objective of the program was to stimulate the development of videotex in Canada and to bring about price reductions through production in quantity.

Under this program, over 50 companies received federal government support. All except one are still actively involved in Telidon-related work. A body of expertise began to emerge under the auspices of the IISP Program that has continued to grow.

PUBLIC INITIATIVES PROGRAM

In April 1982 contributions totalling $1 million were given to non-profit organizations to develop Telidon services for consumers, the disabled, Inuit, natives and women. The objectives of this program also included encouraging these organizations to learn more about Telidon and how it could be used to improve the services they provide. Qualifying organizations proposed a number of new Telidon applications, ranging from consumer ratings of automobiles to native language information services and legal advice for women.

CONTENT DEVELOPMENT

The proliferation of terminals and Telidon expertise proved to be only half of the chicken and egg dilemma. Telidon proved to have a voracious hunger for useful content. In response, in January 1984 DOC announced contributions totalling $4.95 million to 27 Canadian organizations to develop commercial data base content and services. The main objective of the program was to increase the amount of high quality and useful content while stimulating immediate investment and employment in the Telidon industry. DOC contributed towards the production of content in the Telidon format. A great deal of content has been produced for a variety of applications in both official languages from coast to coast through the assistance provided by this program.

THE DOC DEMONSTRATION DATA BASE

The DOC data base operated between January 1979 and December 1984. Its primary purpose was to support the development of software licensed to the industry and universities, as well as to educate the industry and the public about Telidon technology and its applications. Although its future is still under review, it has achieved a number of vitally useful purposes during the developmental phase that have contributed to the collective knowledge of government and industry.

Although its original uses end with termination of the existing Telidon program, it may be a precursor of a broader corporate videotex system within the department.

The data base was first demonstrated at Telecom '79 in Geneva when the CRC sent live wire service news via satellite. This avant garde event was not to be replicated anywhere else in the world for two years.

The objective of "Stanley", the early data base, was to educate everyone -- governments, industry, and educational institutions -- on the potential of Telidon and the superiority of the electronic media in many applications.

Some of the purposes served were to provide a host computer and software to the TVOntario field trial; to research the ease of operating this kind of data base; to provide test pages for NAPLPS; to promote specific activities, for example, the 1983 Inuit Circumpolar Conference and the Economic Summit of 1981; and to provide live public displays at the Canadian National Exhibition and the Pacific National Exhibition.

Many organizations such as Infomart, Bell Canada, New Brunswick Telephone, B.C. Telephone, Alberta Government Telephones, Sasktel, as well as educational institutions have benefitted significantly from the DOC data base and from use of the software produced for it. Some 35 Telidon companies and nine government departments contributed packages of information to the data base.

DSS: GOVERNMENT APPLICATIONS

The Department of Supply and Services' (DSS) Centre for Service to the Public was given a mandate by Cabinet to seek methods of using Telidon where the federal government has either a financial or operational involvement. To that end, a variety of projects were set up to examine and develop the use of the Telidon technology. Following are two examples of these projects.

National Museum of Man

The National Museum of Man's Educational and Cultural Affairs division developed four Telidon modules, amounting to some four hours of training, to assist volunteers at the museum who guide visiting groups. The package demonstrates how to use artifacts and exhibits as a resource, discusses the role of the museum and the volunteer's

role. The English version is complete and to be implemented in spring 1985. A French version will soon be complete and a major evaluation will be done to assess the package.

Public Works Canada

A Public Works Canada research project developed a computer-aided design (CAD) system interface to the NAPLPS standard. Software was also developed allowing a user of IBM personal computers to dial up drawings created on the CAD computer and display them on the personal computer. This is a valuable application for the design and construction industry.

OVER TO INDUSTRY

As the "transfer to industry" is accomplished, it is with great pride and not a little nostalgia that DOC hands on the Telidon torch. Despite the early setbacks caused by the recession and the prolonged debate over standards, Telidon is now a fact of life in the business, commercial and educational worlds. Canadian industry has benefitted significantly from this period of federal support. At least 1,400 new jobs have been created, and the NAPLPS/Telidon has been given a headstart in Canada and around the world. Now it is up to Canadian industry to see that it flourishes.

CONTINUING FEDERAL GOVERNMENT ACTIVITIES

FUTURE FEDERAL SERVICES

Even though the Telidon torch is being passed to the private sector, the industry will not be abandoned by federal government. The industry will continue to benefit from all federal research and development programs and tax incentives, as well as marketing support programs. Continuing programs and services are described in the following articles.

SETTING STANDARDS

As described in detail earlier, NAPLPS was developed in Canada by the CVCC/CSA working group who eventually established the present T-101 standard that replaced the T-100 standard (changed from S-100).

There are now three CCITT accepted standards: the North American Videotex/Teletext Presentation Level Protocol Syntax (NAPLPS); Character and Pattern Telephone Access Information Network (CAPTAIN); and Conference of European Post and Telecommunications Administrations (CEPT). Although each has its merits and applications, it should be remembered that the fundamental design philosophy of NAPLPS is its independence from the terminal equipment. It is also far more efficient in data storage and transmission, reducing equipment and communication costs.

The establishment of NAPLPS gives confidence and stability to the Telidon industry since there can be no change except by collective agreement.

The DOC group will continue to work with industry representatives in all relevant areas of standardization. For example, work is being done towards CSA/ANSI acceptance of the test pages now in use to check whether decoders have interpreted the NAPLPS correctly.

A standard is also being developed with our American counterparts for the interfaces between computers and Telidon terminals. From the six methods which are presently operative, one common standard should be ready in time for the 1988 meeting of CCITT.

TELIDON DATA BASES IN CANADA, MARCH 1985

Telidon has grown from an idea to a viable industry for Canada. Today there are many companies using Telidon for a variety of applications. The following is a list of data bases and/or applications that now exist in Canada. Please note that the list is by no means complete or exhaustive.

For a comprehensive list of educational uses only of Telidon, please contact Mr. Roger Hart, CONSORTEL, 235-560 Johnson Street, Victoria, British Columbia, V8W 3C6, Telephone: (604) 381-5502, ISO network account: <hart@ean.ubc.cdn>

Data base or application	Description and content	Contact
Vuformation	An information source for visitors at convention centres. Includes a map of facilities, schedule of events and information.	Mark Ferguson Videotex Manager United Audio-Visual Resources 1770 Mattawa Avenue Mississauga, Ontario L4X 1K1 (416) 275-6010
Teleguide	Tourism information located in public access kiosks at major tourist attractions, hotels and transportation facilities throughout Toronto and Ottawa.	Rosanne Lee Corporate Communications Infomart 164 Merton Street Toronto, Ontario M4S 3A8 (416) 489-6640
Electronic Gourmet	Meal planning information includes recipes, meal plan suggestions and combinations plus wine selection.	Motria U. Kydon Home Management Systems Inc. 61 Sherbrooke Street Winnipeg, Manitoba R3C 2B2 (204) 774-3731
Information On-Line	Public information on the city of Vancouver. Includes community information, government services, consumer tips.	Margaret McHugh Manager Information On-Line 105-1956 West Broadway Vancouver, British Columbia V6J 1Z2 (604) 738-2553

Data base or application	Description and content	Contact
Weather Radar	Weather information updated automatically from atmospheric weather radar locations in Saskatchewan.	Graham Bradley Manager Business Developments Sask Tel 2121 Saskatchewan Drive Regina, Saskatchewan S4P 3Y2 (306) 347-3908
CORD/Canadian On-line Record Data base	Music industry information including album jackets, portraits of recording artists, biographies and record reviews.	Donna Murphy Editorial Director CIRPA/ADISQ Foundation 144 Front Street West, Suite 300 Toronto, Ontario M5W 2L7 (416) 593-1665
Telichart	Statistical information in graphic format. Includes statistics on population, employment, manufacturing, exports, energy, transportation, etc.	John McLaughlan President Marketfax Info Services 55 Yonge Street, Suite 509 Toronto, Ontario M5E 1J4 (416) 365-1899
BN Infovision	Electronic news service with continously updated news, sports, business, entertainment and weather information.	Stephanie McKendrick Manager Cable TV Products 36 King Street East Toronto, Ontario M5C 2L9 (416) 364-3172
Health Care Information System	Hospital management information located in provincial health care offices across Canada providing information on poison control, drugs, education and training to hospital administrations and provincial health care associations.	Paul Hurley Network Co-ordinator Canadian Hospital Association 17 York Street, Suite 100 Ottawa, Ontario K1N 9J6 (613) 238-8005
ATN Adaptive Testing	Program containing questions and situations related to the operation of a motor vehicle, designed for individuals applying for their licences.	Rex Schofield General Manager ATN Adaptive Testing 601 West Broadway, Suite 505 Vancouver, British Columbia V5Z 4C2 (604) 387-3141

Data base or application	Description and content	Contact
Videopress Interactive Electronic Media Services	Mall directory and merchandising system provided in public access kiosks for shoppers at Toronto's Eaton Centre.	Don Fenn President Videopress 148 King Road East King City, Ontario L0G 1K0 (416) 833-6200
Ontario North Information System	Information on Northern Ontario available from kiosks throughout Ontario Place in Toronto. Includes travel planning, industrial development information, etc.	Doug Peter President St. Clair Videotex Design 40 St. Clair Avenue West Toronto, Ontario M4V 1M6 (416) 961-8707
Halifax Defence Complex	An electronic schedule system providing up-to-date information on the day-to-day activities to the employees of the Halifax Defence Complex.	George Quigley Halifax Defence Complex P.O. Box 1480 North Postal Station Halifax, Nova Scotia (902) 426-7383
Télé-Santé	Health inquiry and medical profession reference aid to the general public and doctors. Includes health related subjects such as alcohol abuse, childhood diseases, eating habits and digestive problems.	Michel Bourque Director Computer and Biostatistics Centre Clinical Research Institute of Montreal 110 Pine Avenue West Montreal, Quebec H2W 1R7 (514) 842-1481
Grassroots	Rural and agricultural information for farmers, ranchers and agricultural service industries.	Gary Enns Manager Subscriber Marketing Infomart 511-1661 Portage Avenue Winnipeg, Manitoba R3J 3T7 (204) 772-9453
Marketfax	Stock market analysis with current and past listings of American and Canadian market information displayed in several forms of graphic analysis familiar to the financial industry.	John McLaughlan President Marketfax Info Services 55 Yonge Street, Suite 509 Toronto, Ontario M5E 1J4 (416) 365-1899

Data base or application	Description and content	Contact
560	Up-to-date transportation information on bus schedules/delays located in shopping centres and bus terminals.	Peter Van der Kloot Manager M.I.S. OC Transpo 1500 St. Laurent Blvd. Ottawa, Ontario K1G 0Z8 (613) 741-6440
Infodata	Information on cerebral palsy available in facilities across Ontario for the rehabilitation of individuals with cerebral palsy.	Clarence Myers Ontario Federation for the Cerebral Palsied 1020 Laurence Avenue West Suite 300 Toronto, Ontario M6A 1C8 (416) 787-4595
Palais des Congrès	An information source for visitors to the Palais des Congrès in Montreal. Includes the meeting agendas and directions to meeting locations.	Pierre Parent Vice-president of Development Palais des Congrès in Montreal 201 Viger West Montreal, Quebec H2Z 1X7 (514) 871-8122
TABS	International weather forecasting service for pilots, boaters and farmers. Information is received from weather satellites for use by system operators across North America.	Mory Hirt President Meteorological Environmental Planning Ltd. 7050 Woodbine Avenue, Suite 100 Markham, Ontario L3R 4G8 (416) 477-0870
TVOntario	TVOntario offers a videotex and teletext service for users in 55 locations across Ontario. The services provide up-to-date, accurate information on careers and training opportunities for Ontario youth, community events, health care, education, news, weather and financial services.	Robin Hardy Information Publications TVOntario Box 200, Station Q Toronto, Ontario M4T 2T1 (416) 484-2600
InfoNorth	Educational information designed to provide self-paced, self-directed learning. Content includes health, safety, chemistry, geography, environmental studies, biology, and others.	Dr. Richard Danielson President InfoNorth Computing Inc. 160 Douglas Street West Sudbury, Ontario P3E 1G1 (705) 673-5888

Data base or application	Description and content	Contact
Genesis Research	Educational and entertaining information for use in homes and schools. A major portion of the information is in children's picture-book format.	Gregory Stetski Genesis Research Corp. 1036-167 Lombard Avenue Winnipeg, Manitoba R3B 0V3 (204) 949-1581
Inet	A national intelligent communications network for business and government users. The service provides a central gateway to ASCII as well as Telidon data bases.	Al Syberg Telecom Canada 160 Elgin Street, Room 1940 Ottawa, Ontario K1G 3J4 (613) 239-2737
RIDS	A military information system. DND is using Telidon to upgrade the battle management display system at its Canadian Forces NORAD facility in North Bay, Ontario. Content includes maintenance control, battle management, military intelligence and weather.	Captain Doug Thompson Department of National Defence Headquarters Attn: DEEM 2-5 101 Colonel By Drive Ottawa, Ontario K1A 0K2 (613) 996-7038
OASIS	An office automation system designed for Parliament Hill. Uses Telidon to keep the members of Parliament informed on session times, etc.	James Phillips House of Commons 180 Wellington Street, Room 452 Box 993 Ottawa, Ontario K1A 0A6 (613) 992-7414
NAPLPS Test Package	A series of test pages to assist in the evaluation of the compliance of hardware and software to NAPLPS. It will point out quickly any areas of divergence from the standard, and can be used as a "servicing" and verification test of equipment.	Dianne Wade Canadian Advanced Technology Association 275 Slater Street, Suite 803 Ottawa, Ontario K1P 5H9 (613) 236-6550
Infomart Ottawa	A system provider in Ottawa capable of storing many data bases on its mainframe. Includes information on business, finance, tourism, government services, and others.	Nathan Leslie Infomart 141 Laurier Avenue West Suite 300 Ottawa, Ontario K1P 5J3 (613) 238-4588

Data base or application	Description and content	Contact
Cart-aide	Community access system for students, artists and the elderly living in the Milton Park Housing Complex near McGill University. The system has information on teenage sexuality and contraception, armed robbery, dog training, and bicycle safety, among others.	Mark Nader Behelak President Cart-aide 3520 Park Avenue Montreal, Quebec H2X 2H7 (514) 288-2068
Edimedia	Electronic newspaper for several Quebec cable television systems.	Pierre Mathieu Edimedia 390 St. Vallier East Quebec, Quebec G1K 7J6 (418) 647-3250
Tele-Thought	An ASCII and NAPLPS compatible data base that features consumer-oriented news and retail sales. The system will accept credit card numbers as purchase orders and merchandise will be sent to the consumer by mail.	Evant Leibovitch President Telethought Corp. 23 Westmore Drive, Unit 414 Rexdale, Ontario M9V 3Y7 (416) 747-7277
Canada Post	Information on Canada Post and its new products and services, located in Canada Post's new retailing offices across Canada.	David Garmaise Director Retail Systems Canada Post Corp. Station 346 Ottawa, Ontario K1A 0B1 (613) 998-4956
Médiagro	Rural and agricultural information for farmers and agricultural service industry.	Jean-Pierre Lauzon or Gerry Bloxam 515 Consumer's Road Willowdale, Ontario M2J 4Z2 (416) 495-0022

TELIDON POLICY DEVELOPMENT

A policy framework

The development of new content services, including videotex and teletext, has raised a series of policy issues for federal and provincial governments. To reach its full potential, the new content services industry, in which Canadian information providers and system operators are key players, may benefit from some new directions in both telecommunications and broadcasting policies and regulations. The government is addressing these matters on a number of fronts.

Within DOC, a working group is drawing up a Policy Framework for New Content Services, including videotex and teletext, for future consideration by senior management.

Among other things, the working group is examining the following: industry roles; financing provisions for new services; access by information providers to system operators and system operator access to delivery facilities; liability and editorial responsibility; as well as policy considerations related to content, privacy, standards and jurisdiction.

Criminal Code considerations

The government has recently introduced amendments to the Criminal Code to toughen sections dealing with computer crime and theft of computer services.

"From Gutenberg to Telidon"

The Ministers of Communications and Consumer and Corporate Affairs have also asked a parliamentary committee to review a Green Paper on copyright issues, "From Gutenberg to Telidon". Canadians in all regions will be invited to participate in this important debate.

EXTERNAL AFFAIRS: MARKETING ABROAD

Throughout the period of development of Telidon, External Affairs has played an active part in selling Telidon to foreign countries. Significant sales to the United States, Venezuela, Australia and Japan are the first tangible results of international promotion that has laid the foundation for Canadian companies to build their future marketing efforts.

Through External Affairs, as well as through the offices in Canada of the Department of Regional Industrial Expansion, Canadian entrepreneurs can avail themselves of a variety of marketing assistance.

External Affairs will continue to provide international marketing support to the Telidon industry. Its ongoing publicity program includes distribution of 10 comprehensive brochures describing Telidon and its applications. It also makes available to potential customers a catalogue of Canadian Videotex Suppliers, describing their capabilities and the applications of their products. It also regularly briefs journalists on Canadian Telidon capabilities. Articles have appeared in such publications as Business Week, Microsystems, Mini-Micro World, PC Magazine and Micro-computing.

External Affairs recognizes the challenges involved in ventures abroad posed by international competition, new and unfamiliar market conditions or the need for a consortium approach. Companies wishing to establish markets abroad can apply to the Program for Export Market Development of External Affairs through their local office of the Department of Regional Industrial Expansion for up to 50 per cent of costs related to participation in trade shows, exploration of market conditions, establishment of sales offices or creation of consortia to bid on major foreign contracts.

External Affairs organizes trade shows around the world in a number of markets including Telidon, telecommunications and office automation equipment. Firms interested in participating should contact External Affairs.

Every embassy or consulate abroad is equipped to assist with Telidon sales. Over 40 posts have Telidon equipment and give Telidon demonstrations to local business and government representatives. Many posts can lend visiting company representatives standalone terminals for use in trade shows and demonstrations. All can help research the market, identify sales leads, set up a sales offices or advise on local business practices and government regulations.

For further information contact:

Technology Development Division (TTT)
External Affairs
125 Sussex Drive
Ottawa, Ontario
K1A 0G2
(613) 996-1918

THE VALUE OF FIELD TESTING

Since the inception of the Telidon Program, DOC has devoted considerable effort and resources to field trials on the belief that any new technology must be tested in real life situations before it can become a practical reality.

The Telidon field trials, which began in 1979 and continued through 1984, are described fully in Telidon Trials and Services, issued in 1983, which is available free from DOC in both official languages. The purpose of the trials was to ensure Telidon's technical and operational feasibility and to foster Telidon in Canadian and international markets.

In all, over 40 Telidon trials and services have been held in Canada, the United States and around the world. DOC encouraged new uses and entered into agreements for hardware and software testing as well as content development and audience acceptance. As the evaluations are being concluded, results indicate a large measure of reliability.

Now that the trials are complete, the new Informatics Applications Program of DOC will continue to support the industry in many ways. The expertise that has developed in DOC through the field trials as well as documentation of the results of ongoing activities continues to be available on request.

RESEARCH GOES ON AT THE CRC

Since 1969, the research into information communication systems, which led to the invention of Telidon, has been going on at DOC's Communications Research Centre just west of Ottawa.

This research has continued to enhance both technical and behavioural understanding of the videotex and teletext information systems of which the NAPLPS coding scheme is a key element. In future, the Information Technology and Systems Branch of DOC will continue to explore the many enhanced and expanded capabilities that the Canadian videotex/teletext industry needs in order to maintain its leading edge.

At present, full color imagery is possible with Telidon, but research continues in improving the speed and quality of presentation. Theoretically it is possible to display full-screen images at a rate of up to 30 per second (the scanning rate of television) but decoder costs and complexities will affect the features of a particular design implementation.

Also under investigation is the enhancement of the visual image with sound. Unlike film or videotape, where sound is provided on a companion channel, Telidon sound will be intermixed with the visual information. The "sound descriptors" will be fully integrated into the scheme of the present picture description instructions of the NAPLPS standard.

Reasonably priced decoders are being developed with the ability to accommodate these new features. In parallel, more efficient input techniques are being explored. For example, Norpak is exploiting pattern recognition techniques in order to capture and encode information efficiently and quickly, directly from an existing document.

Field evaluation of an information system can lead to improved service. To examine the technical quality of teletext service, a fully instrumented CRC van is being used in co-operation with broadcasters and carriers. Telidon information is transmitted and its reception is measured and evaluated in a variety of situations, particularly where interference may be a factor.

Finally, the group has placed a priority on pursuing the concept of the "common visual space," the ability to work interactively at terminals using Telidon-based tools and techniques with other similar terminals that may be separated physically by any amount of distance.

As in the past, the role of CRC research is to be at the forefront of knowledge in the emerging areas of videotex and teletext. Because the field is so vast, not all aspects can be worked on directly. However, the group will pay special attention to the needs of the emerging Canadian industry in order to remain internationally competitive.

BEHAVOURIAL RESEARCH IS VITAL

The Behavourial Research Section at DOC began to study user behaviour in the mid-1970s and has played an active part in the development of Telidon since then. The results of psychological experiments at both the CRC and headquarters in Ottawa assist in determining equipment and software design that will work for users.

One major area of investigation is the design of information search and retrieval methods. Studies showed that menu and keyword search systems can be improved by testing them with users. Combined menu-keyword systems were found to be especially useful and other search methods are now being investigated. How to design a computer search system for "browsing" is an interesting related question for which little research has been published.

Designing and integrating graphics to their best advantage is being studied with a view to understanding how people use and interpret them. For example, studies have investigated whether line drawings or photographs are more appropriate for educational and other purposes. Another study is now investigating what makes graphics aesthetically pleasing.

The design of a visual space on a display screen has been examined to find out, for example, how far apart the letters should be for optimal reading. Other studies found that reading from certain types of displays was slower than reading from the printed page and the question of how to format pages for optimal reading has now been taken up by academic researchers.

Work has been done on the design of keyboards and keypads and on how to format the numbers on pages so that people will remember them most easily. How much delay, error or interference in the teletext signal is tolerable to users has also been investigated.

Work is ongoing into the design of knowledge bases, a form of data base that will bring the knowledge of experts to users at their terminals. The work, as well as studies into the methods of evaluating page design, will assist in future data base evolution.

FEDERAL GOVERNMENT SUPPORT PROGRAMS

Any company or individual with a Telidon-related idea or initiative may request government financial support from the following government programs:

Department of Communications

University Research Program

Department of Regional Industrial Expansion

Defence Industry Productivity Program (DIP)
Industry and Regional Development Program (IRDP)

National Research Council

Industry Research Assistance Program (IRAP)
Program for Industry and Laboratory Projects (PILP)

Supply and Services Canada

Source Development Fund Program (SOURCE)
Unsolicited Proposals (UP)

VIDEOTEX CANADA: TORONTO MARCH 4 & 5, 1985

At the request of the videotex industry, DOC sponsored and organized a two day meeting. It was held in Toronto at the new Metro Toronto Convention Centre on March 4 and 5, 1985. Its purpose was to bring industry people together for an overview of the current "state-of-the-art" of videotex, to allow for business transactions and social interaction, and to provide feedback to government planning.

Despite the worst storm of the winter, over 450 participants from all sectors of the economy came together for spirited discussions in sessions ranging from a historical overview to "The Canadian Market: Exploring the Opportunities," to "Living with the Standard," to "The American Scene," to "New Frontiers". Marcel Masse, Minister of Communications, addressed the meeting on the "Government Role in Informatics" and then met the industry at a cocktail reception. A session on the respective roles of government and industry in the development of the industry was chaired by Bert Blevis of DOC. This session allowed the government and industry representatives to receive challenges which would be addressed over the next few months.

A report of the meeting will be available in late 1985 as a departmental publication.

For further information, contact:

Mary Frances Laughton
Informatics Applications Program
Department of Communications
2nd Floor, 300 Slater Street
Ottawa, Ontario
K1A 0C8
Telephone: (613) 995-4376.

INDUSTRY ASSOCIATION

During the Videotex Canada Meeting there was a meeting of industry leaders which discussed the future of an association in light of the end of the Telidon Program at the Department of Communications. Rex Schofield of Dominion Information Services agreed to act as co-ordinator for the interim. For information, he can be reached at:

Rex C. Schofield
Vice President Business Development
Dominion Information Services
4400 Dominion Street
Burnaby, British Columbia
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TELIDON DATA BASES IN CANADA

Enclosed with Telidon Reports No. 13 is a list of some current Canadian Telidon data bases and applications, prepared by the DOC Telidon Program.

In addition, a more comprehensive list of educational data bases is available from:

Mr. Roger Hart
CONSORTEL
235-560 Johnson Street
Victoria, British Columbia
V8W 3C6
Telephone: (604) 381-5502
ISO network account: ←hart@ean.ubc.cdn→

Canada